## **CLAIMS**

1. A method of performing path maximum transmission unit (PMTU) discovery when two proxies are modifying a connection between a client and a server comprising the steps of:

receiving one or more packets from a client by a first proxy;
estimating a new PMTU, larger than the current PMTU;
repacketizing said client packets into at least one new packet according to the new PMTU;
transmitting said at least one new packet;
receiving said at least one new packet by a second proxy;
detecting fragmentation or non-fragmentation of said at least one new packet;
generating notification of the results of said fragmentation detecting step; and

transmitted said notification to said first proxy.